

Title (en)
IR absorbing compositions

Title (de)
IR-absorbierende Zusammensetzungen

Title (fr)
Compositions absorbant le rayonnement infrarouge

Publication
EP 1674512 A3 20060712 (DE)

Application
EP 06007505 A 20010423

Priority
• EP 01931637 A 20010423
• DE 10022037 A 20000505

Abstract (en)
[origin: DE10022037A1] Transparent thermoplastic polymer compositions contain: (A) an organic NIR absorber; and (B) oxide particles of average size below 20 nm which are surface modified by polyvinyl acetate or a silane. Transparent thermoplastic polymer compositions contain: (A) an organic NIR (near infrared) absorber; and (B) oxide particles of average size below 20 nm which are In oxides with 2-30% of the In atoms replaced by Sn atoms or with 10-70% of the O atoms replaced by F atoms, Sn oxides with 2-60% of the Sn replaced by Sb and/or 10-70% of the O replaced by F, Zn oxides with 1-30% of the Zn replaced by Al or 2-30% of the Zn replaced by In or Ga, perovskites or compounds of formula (I), the surfaces of these particles being modified by polyvinyl acetate or a silane of formula (II). A_xBO_{3-y} (I) $SiR_{1>R_{2>R_{3>R_{4>}}}}$ (II) $x = 0.01-3$; $y = 0.001-1.5$; $A = Ca, Sr, Ba, Al, In, Sn, Pb, Cu, Ag, Cd, Li, Na, K, Rb, Cs, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, H$ or NH_4 ; $B = W, Mo$ or Re ; $R_{1>} = 1-30C$ alkyl; $R_{2>}$ and $R_{3>} = 1-30C$ alkyl or alkoxy, Cl, Br or I ; and $R_{4>} = 1-30C$ alkoxy, Cl, Br or I .
[origin: DE10022037A1] Transparent thermoplastic polymer compositions contain: (A) an organic NIR absorber; and (B) oxide particles of average size below 20 nm which are surface modified by polyvinyl acetate or a silane. Transparent thermoplastic polymer compositions contain: (A) an organic NIR (near infrared) absorber; and (B) oxide particles of average size below 20 nm which are In oxides with 2-30% of the In atoms replaced by Sn atoms or with 10-70% of the O atoms replaced by F atoms, Sn oxides with 2-60% of the Sn replaced by Sb and/or 10-70% of the O replaced by F, Zn oxides with 1-30% of the Zn replaced by Al or 2-30% of the Zn replaced by In or Ga, perovskites or compounds of formula (I), the surfaces of these particles being modified by polyvinyl acetate or a silane of formula (II). A_xBO_{3-y} (I) $SiR_{1>R_{2>R_{3>R_{4>}}}}$ (II) $x : 0.01-3$; $y : 0.001-1.5$; $A : Ca, Sr, Ba, Al, In, Sn, Pb, Cu, Ag, Cd, Li, Na, K, Rb, Cs, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, H$ or NH_4 ; $B : W, Mo$ or Re ; $R_{1>} 1-30C$ alkyl; $R_{2>}$ and $R_{3>} 1-30C$ alkyl or alkoxy, Cl, Br or I ; and $R_{4>} 1-30C$ alkoxy, Cl, Br or I .

IPC 8 full level
C08J 3/20 (2006.01); **C08K 3/22** (2006.01); **C08J 5/00** (2006.01); **C08K 5/3447** (2006.01); **C08K 9/02** (2006.01); **C08K 9/04** (2006.01); **C08L 101/00** (2006.01); **G02B 5/20** (2006.01); **C08K 9/06** (2006.01); **C08K 9/08** (2006.01)

CPC (source: EP KR US)
B82Y 30/00 (2013.01 - EP KR US); **C08K 3/22** (2013.01 - EP KR US); **C08K 9/06** (2013.01 - EP KR US); **G02B 5/208** (2013.01 - EP KR US); **Y10T 428/29** (2015.01 - EP US); **Y10T 428/2947** (2015.01 - EP US); **Y10T 428/2982** (2015.01 - EP US)

Citation (search report)
• [Y] EP 0795565 A1 19970917 - NIPPON KAYAKU KK [JP]
• [Y] US 5807511 A 19980915 - KUNIMATSU MASAOKI [JP], et al
• [Y] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 12 25 December 1997 (1997-12-25)
• [Y] DATABASE WPI Section Ch Week 199719, Derwent World Patents Index; Class A60, AN 1997-209595, XP002173525
• [Y] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 09 31 July 1998 (1998-07-31)

Cited by
CN108886098A; WO2012039901A1

Designated contracting state (EPC)
BE DE ES NL

DOCDB simple family (publication)
DE 10022037 A1 20011108; AU 5835901 A 20011120; BR 0110467 A 20030408; CN 1427865 A 20030702; DE 50110344 D1 20060810; DE 50113647 D1 20080403; EP 1287061 A1 20030305; EP 1287061 B1 20060628; EP 1674512 A2 20060628; EP 1674512 A3 20060712; EP 1674512 B1 20080220; ES 2267766 T3 20070316; ES 2301109 T3 20080616; JP 2003532771 A 20031105; KR 20020091270 A 20021205; TW 572948 B 20040121; US 2003094600 A1 20030522; US 7074351 B2 20060711; WO 0185833 A1 20011115

DOCDB simple family (application)
DE 10022037 A 20000505; AU 5835901 A 20010423; BR 0110467 A 20010423; CN 01809055 A 20010423; DE 50110344 T 20010423; DE 50113647 T 20010423; EP 0104548 W 20010423; EP 01931637 A 20010423; EP 06007505 A 20010423; ES 01931637 T 20010423; ES 06007505 T 20010423; JP 2001582428 A 20010423; KR 20027014770 A 20021104; TW 90110674 A 20010504; US 25899402 A 20021031